

***NATIONAL WEATHER SERVICE MANUAL 10-923  
NOVEMBER 20, 2002***

***Operations and Services  
Hydrologic Services Program, NWSPD 10-9***

***WEATHER FORECAST OFFICE HYDROLOGIC PRODUCT EXAMPLES***

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**NOTICE:** This publication is available at: <http://www.nws.noaa.gov/directives/>

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**OPR:** OS31 (K. Lynott)

**Certified by:** OS3 (G. Austin)

**Type of Issuance:** Initial

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***SUMMARY OF REVISIONS:*** None.

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Signed  
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and Weather Services

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November 6, 2002  
Date

**Weather Forecast Office Hydrologic Product Examples**

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1. Purpose. This directive provides examples of weather forecast office (WFO) hydrologic products described in NWS Instruction 10-922. Some WFO hydrologic products issued under a given Advanced Weather Information Processing System (AWIPS) identifier are used for multiple purposes, so more than one example is provided for each of the following products. Minor variations may exist in regional implementation of NWS Instruction 10-922, so these samples should not be taken as the only prescribed formats.

## 2. Hydrologic Outlook (ESF).

### 2.1 Example #1 - For Potential of Flooding Caused by Snowmelt.

FGUS73 KBIS 221358  
 ESFBIS  
 NDZ001>005-009>013-017>023-025-031>037-040>048-050>051-231200-

HYDROLOGIC OUTLOOK  
 NATIONAL WEATHER SERVICE BISMARCK ND  
 800 AM CST FRI MAR 22 2002

...SNOWMELT FLOOD OUTLOOK NUMBER 2...

THIS SNOWMELT OUTLOOK IS FOR RIVER BASINS IN WEST AND CENTRAL NORTH DAKOTA AND INCLUDES THE SOURIS RIVER DRAINAGE...THE MISSOURI RIVER DRAINAGE...AND THE JAMES RIVER DRAINAGE.

BECAUSE OF THE LACK OF SIGNIFICANT AMOUNTS OF SNOW ON THE GROUND, THERE IS LITTLE POTENTIAL FOR FLOODING DURING THIS SNOWMELT SEASON EVEN IF NORMAL PRECIPITATION FOR THE NEXT TWO WEEKS IS ADDED TO THE CURRENT SNOW CONDITIONS. RIVER LEVELS AT ALL FORECAST POINTS ARE EXPECTED TO REMAIN BELOW FLOOD STAGE.

ABOVE NORMAL SPRING PRECIPITATION AND ICE JAMS WOULD INCREASE THE FLOOD THREAT DURING SPRING THAW. BELOW NORMAL PRECIPITATION OR A GRADUAL MELT WOULD DECREASE THE FLOOD THREAT.

SUMMARY OF NORTH DAKOTA'S WINTER CONDITIONS...  
 THE PAST WINTER BROUGHT ABOVE NORMAL TEMPERATURES AND BELOW NORMAL PRECIPITATION. FALL MOISTURE (SEPTEMBER-NOVEMBER 2001) WAS ALSO WELL BELOW NORMAL IN NORTH DAKOTA. THIS HAS CREATED BELOW NORMAL SOIL MOISTURE CONDITIONS. FROST DEPTHS AVERAGE 18 TO 24 INCHES. MARCH TEMPERATURES HAVE BEEN MUCH BELOW NORMAL WITH ABOVE NORMAL SNOWFALL.

THE 6-10 DAY FORECAST FOR NORTH DAKOTA CALLS FOR ABOVE NORMAL TEMPERATURES AND NORMAL PRECIPITATION.

THE 30-DAY AND 90-DAY OUTLOOKS INDICATE NO DEVIATION FROM NORMAL FOR PRECIPITATION OR TEMPERATURE.

CURRENT SNOW CONDITIONS...  
 THERE IS GENERALLY 3 TO 6 INCHES OF SNOW COVER ACROSS WEST AND CENTRAL NORTH DAKOTA. MUCH OF THIS FELL IN THE LAST SEVERAL DAYS.

WATER EQUIVALENTS WERE GENERALLY ONE HALF INCH OR LESS.

BASIN SNOWPACK IN THE MOUNTAINS OF MONTANA AND WYOMING WAS GENERALLY 50% TO 70% OF AVERAGE.

CURRENT RIVER CONDITIONS...

RIVERS AND STREAMS IN NORTH DAKOTA HAVE NEAR NORMAL TO SLIGHTLY ABOVE NORMAL FLOWS WITH MOST RIVERS FROZEN. ALL FORECAST POINTS ARE CURRENTLY BELOW FLOOD STAGE.

THIS IS THE LAST SCHEDULED OUTLOOK FOR THE SEASON.

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## 2.2 Example #2 - For Potential of Flooding Caused by Rainfall.

FGUS73 KSGF 102135

ESFSGF

MOC055-056-058-060>062-110400-

HYDROLOGIC OUTLOOK

NATIONAL WEATHER SERVICE SPRINGFIELD MO

335 PM CST FRI DEC 10 1999

...ANOTHER HEAVY RAINMAKER TO HIT THE OZARKS...

OVER THE PAST COUPLE OF WEEKS...SIGNIFICANT RAINFALL HAS FALLEN ACROSS THE OZARKS. AS A RESULT...MOST OF SOUTHWEST MISSOURI IS ALMOST BACK TO NORMAL RAINFALL...AND IN SOME CASES ABOVE NORMAL. THROUGH DECEMBER 10...SPRINGFIELD HAS RECEIVED 6.84 INCHES...AND MANY AREAS OF THE OZARKS HAVE RECEIVED MORE THAN EIGHT INCHES. THE NORMAL RAINFALL FOR SPRINGFIELD IN DECEMBER IS 3.16 INCHES.

BEGINNING MONDAY AND EARLY TUESDAY...THE OZARKS WILL RECEIVE ANOTHER SOAKING RAIN. CURRENT WEATHER MODELS INDICATE A STORM TRACK ACROSS NORTHERN ARKANSAS AND SOUTHERN MISSOURI...BASICALLY THE SAME TRACK TAKEN BY THE RECENT STORMS. THIS MEANS ABUNDANT GULF MOISTURE WILL BE PULLED INTO THE STORM AND DEPOSIT UPWARDS OF ONE TO TWO INCHES ACROSS MOST SECTIONS OF SOUTHERN MISSOURI.

FLOODING WILL OCCUR BECAUSE THE GROUND IS SATURATED FROM RECENT RAINS. LOW WATER CROSSINGS AND SMALL STREAMS COULD SWELL TO SMALL RAGING STREAMS OF WATER. RIVERS...MAINLY ACROSS SOUTHERN MISSOURI... COULD RISE CLOSE TO OR ABOVE FLOOD STAGE BY NEXT TUESDAY NIGHT AND WEDNESDAY.

THE HAZARDOUS WEATHER OUTLOOK PRODUCT WILL BE UPDATED WITH THE LATEST INFORMATION THROUGHOUT THE WEEKEND. ANOTHER SOURCE OF CURRENT WEATHER INFORMATION FOR SOUTHERN MISSOURI IS THROUGH OUR WEB PAGE AT:  
[www.crh.noaa.gov/sgf/](http://www.crh.noaa.gov/sgf/)

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HYDROLOGIC OUTLOOK

RIVER	COUNTY	FLOOD STAGE	LATEST STAGE	CREST	FORECAST/TIME
LOW RIVER	JACKSON	14.8 FT	13.1 FT		FRI 6 AM

3. Flood Watch (FFA).

3.1 Example #1 - For Flash Flooding.

WGUS66 KSGX 301055  
FFASGX  
CAC065-071-073-301700-

URGENT - IMMEDIATE BROADCAST REQUESTED  
FLOOD WATCH  
NATIONAL WEATHER SERVICE SAN DIEGO CA  
355 AM PDT WED AUG 30 2000

THE NATIONAL WEATHER SERVICE IN SAN DIEGO HAS ISSUED A FLOOD WATCH  
EFFECTIVE UNTIL 9 PM PDT FOR THE MOUNTAINS AND DESERTS OF THE FOLLOWING  
SOUTHERN CALIFORNIA COUNTIES...

SOUTHWESTERN SAN BERNARDINO  
WESTERN RIVERSIDE  
SAN DIEGO

MONSOONAL MOISTURE REMAINS ENTRENCHED ACROSS THE MOUNTAINS AND  
DESERTS OF SOUTHWEST CALIFORNIA. NUMEROUS THUNDERSTORMS...WITH  
LOCALLY HEAVY RAINFALL...ARE EXPECTED TO DEVELOP ACROSS THE MOUNTAINS  
AND DESERTS OF SOUTHWEST CALIFORNIA THIS AFTERNOON. THUNDERSTORMS  
SHOULD PERSIST INTO THE EARLY EVENING.

A FLOOD WATCH MEANS THAT FLOODING IS POSSIBLE BUT NOT IMMINENT IN THE  
WATCH AREA. PEOPLE IN THE WATCH AREA ARE ADVISED TO CHECK  
PREPAREDNESS REQUIREMENTS...KEEP INFORMED AND BE READY FOR QUICK  
ACTION IF FLOODING THREATENS...ESPECIALLY IN NARROW CANYONS.

THE NEXT FLOOD STATEMENT CONCERNING THIS WATCH WILL BE ISSUED BY THE  
NATIONAL WEATHER SERVICE IN SAN DIEGO AROUND 8 AM PDT.

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3.2 Example #2 - For Mainstem River Flooding.

WGUS43 KICT 231010  
FFAICT  
KSZ032>040-066>068-090>093-095-231600-

URGENT - IMMEDIATE BROADCAST REQUESTED  
FLOOD WATCH  
NATIONAL WEATHER SERVICE WICHITA KS  
410 AM CST THU MAR 23 2000

THE NATIONAL WEATHER SERVICE IN WICHITA HAS ISSUED A FLOOD WATCH FOR  
PEOPLE IN THE FOLLOWING COUNTIES UNTIL 4 AM CST FRIDAY

IN CENTRAL KANSAS...

ELLSWORTH	LINCOLN	MARION
MCPHERSON	BARTON	RICE
RUSSELL	SALINE	CHASE

IN SOUTH CENTRAL KANSAS...

COWLEY	HARPER
KINGMAN	BUTLER
SEDGWICK	SUMNER

HARVEY
RENO

A STRONG STORM SYSTEM WILL MOVE NORTHEAST ACROSS KANSAS AND OKLAHOMA LATER TODAY AND TONIGHT. SATURATED SOILS CURRENTLY PERSIST... ESPECIALLY ACROSS THE SALINE RIVER BASIN WHERE WIDESPREAD SHOWERS AND THUNDERSTORMS ARE EXPECTED. ADDITIONAL MOISTURE WILL CONTINUE TO BE DRAWN NORTHWARD INTO THE ENTIRE WATCH AREA AS THE STORM SYSTEM APPROACHES. AS A RESULT...PERIODS OF HEAVY RAIN MAY OCCUR NEAR SWOLLEN RIVERS THROUGH TONIGHT.

A FLOOD WATCH MEANS FLOODING IS POSSIBLE BUT NOT IMMINENT IN THE WATCH AREA. PERSONS IN CENTRAL AND SOUTHERN KANSAS SHOULD BE AWARE OF THE POSSIBILITY FOR HEAVY RAINFALL...AVOID LOW LYING AREAS AND BE CAREFUL NEAR RISING CREEKS AND RIVERS.

BE PREPARED TO SEEK HIGHER GROUND IN THE EVENT A WARNING IS ISSUED FOR YOUR AREA TODAY OR TONIGHT.

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#### 4. Flash Flood Warning (FFW).

##### 4.1 Example #1 - For Flash Flooding Caused by Heavy Rainfall.

WGUS51 KOKX 141656  
FFWOKX  
NYC103-141800-

BULLETIN - EAS ACTIVATION REQUESTED  
FLASH FLOOD WARNING  
NATIONAL WEATHER SERVICE NEW YORK NY  
1255 PM EDT MON AUG 14 2000

THE NATIONAL WEATHER SERVICE IN UPTON HAS ISSUED A

\* FLASH FLOOD WARNING FOR  
SOUTHWEST SUFFOLK COUNTY IN SOUTHEASTERN NEW YORK STATE

\* UNTIL 200 PM EDT

\* AT 1254 PM NATIONAL WEATHER SERVICE DOPPLER RADAR INDICATED  
THUNDERSTORMS MOVING NORTHWEST TOWARD THE WARNED AREA. RAINFALL  
RATES FROM 2 TO 3 INCHES PER HOUR WILL CAUSE FLASH FLOODING OF  
LOW LYING AND POOR DRAINAGE AREAS.

DO NOT DRIVE YOUR VEHICLE INTO AREAS WHERE THE WATER COVERS THE  
ROADWAY. VEHICLES CAUGHT IN RISING WATER SHOULD BE ABANDONED. MOVE  
TO HIGHER GROUND IMMEDIATELY!

REPORT SEVERE WEATHER TO THE NEAREST LAW ENFORCEMENT AGENCY. THEY  
WILL RELAY YOUR REPORT TO THE NATIONAL WEATHER SERVICE FORECAST  
OFFICE IN UPTON.

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## 4.2 Example #2 - For Flash Flooding Caused by a Dam Failure.

WGUS53 KGLD 221608  
FFWGLD  
COC125-KSC023-NEC057-087-230015-

BULLETIN - EAS ACTIVATION REQUESTED  
FLASH FLOOD WARNING  
NATIONAL WEATHER SERVICE GOODLAND KS  
1008 AM MDT MON APR 22 2002

THE NATIONAL WEATHER SERVICE IN GOODLAND HAS ISSUED A

\* FLASH FLOOD WARNING FOR PEOPLE IN THE FOLLOWING LOCATIONS

IN NORTHEAST COLORADO  
SOUTHEASTERN YUMA COUNTY...INCLUDING THE TOWN OF HALE

IN NORTHWEST KANSAS  
CHEYENNE COUNTY...INCLUDING THE TOWN OF ST FRANCIS

IN SOUTHWEST NEBRASKA  
SOUTHEASTERN DUNDY COUNTY...INCLUDING THE TOWN OF BENKELMAN  
WESTERN HITCHCOCK COUNTY...INCLUDING THE TOWN OF STRATTON

\* UNTIL 615 PM MDT (715 PM CDT)

\* THE UNITED STATES BUREAU OF RECLAMATION AND THE NATIONAL WEATHER SERVICE REPORTS THAT FLASH FLOODING IS DEVELOPING FROM WATER ERODING BONNY DAM...AND IS RESULTING IN THE FAILURE OF THE STRUCTURE.

THIS INCLUDES THE RESIDENTS OF HALE...ST. FRANCIS...BENKELMAN AND STRATTON. THE ESTIMATED TIME FOR THE LEADING EDGE OF THE FLOOD WAVE TO REACH HALE IS 22 MINUTES (1030 AM MDT)...ST. FRANCIS 2 HOURS 40 MINUTES (1248 PM MDT)...BENKELMAN 5 HOURS 30 MINUTES (338 PM MDT) AND STRATTON NEARLY 8 HOURS (6 PM MDT).

MOVE TO ESCAPE FLOOD WATERS AND DO NOT STAY IN AREAS SUBJECT TO FLOODING WHEN WATER BEGINS RISING. THIS IS A VERY DANGEROUS SITUATION DOWNSTREAM OF BONNY DAM! ALL PEOPLE LIVING ALONG OR LOCATED NEAR THE SOUTH FORK REPUBLICAN AND REPUBLICAN RIVERS SHOULD BEGIN EVACUATION...AND MOVE TO HIGHER GROUND IMMEDIATELY!

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## 5. Flash Flood Statement (FFS).

### 5.1 Example #1 - To Update a Flash Flood Warning.

RWUS32 KSTL 240730  
FFSSTL  
ILC005-051-117-121-135-241130-

FLASH FLOOD STATEMENT  
NATIONAL WEATHER SERVICE ST LOUIS MO  
230 AM CDT THU AUG 24 2000

...THE FLASH FLOOD WARNING REMAINS IN EFFECT FOR MACOUPIN...  
MONTGOMERY...BOND...FAYETTE AND MARION COUNTIES UNTIL 630 AM CDT...

FLASH FLOODING CAN BE EXPECTED ACROSS PARTS OF THESE AREAS FOR THE  
REST OF TONIGHT...AS ADDITIONAL THUNDERSTORMS WILL CONTINUE TO  
PRODUCE MODERATE TO HEAVY RAIN.

AT 227 AM CDT...WEATHER SERVICE DOPPLER RADAR INDICATED THUNDERSTORMS  
PRODUCING VERY HEAVY RAIN IN AN AREA FROM NEAR LITCHFIELD ILLINOIS  
TO JUST EAST OF SALEM ILLINOIS. THUNDERSTORMS HAVE BEEN DEVELOPING  
WEST OF THE LITCHFIELD AREA AND MOVE SLOWLY SOUTHEAST TOWARD SALEM  
OVER THE PAST SEVERAL HOURS. RADAR ESTIMATES INDICATE 3 TO 5 INCHES  
OF RAIN HAS FALLEN. LAW ENFORCEMENT OFFICERS IN THE AREA REPORT  
SEVERAL ROADS ARE COVERED WITH WATER AND ARE CURRENTLY IMPASSIBLE.

IF FLASH FLOODING IS OBSERVED OR IMMINENT...MOVE QUICKLY TO HIGHER  
GROUND! NEVER DRIVE INTO AN AREA WHERE WATER COVERS THE ROAD. BE  
ESPECIALLY CAUTIOUS AT NIGHT WHEN IT IS HARDER TO RECOGNIZE THE  
DANGERS OF FLOODING.

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## 5.2 Example #2 - To Terminate a Flash Flood Warning.

WGUS72 KILM 302300-  
FFSILM  
NCC019-129-302330-

FLASH FLOOD STATEMENT  
NATIONAL WEATHER SERVICE WILMINGTON NC  
700 PM EDT THU AUG 30 2001

...THE FLASH FLOOD WARNING HAS EXPIRED FOR NEW HANOVER AND BRUNSWICK  
COUNTIES...

NATIONAL WEATHER SERVICE RADAR INDICATED THE HEAVIEST RAINFALL WAS  
MOVING OFF THE COAST...AND THE FLASH FLOOD THREAT NO LONGER EXISTED.  
SOME MINOR PONDING OF WATER MAY CONTINUE AS LIGHT RAIN PERSISTS THIS  
EVENING.

REMAIN CAUTIOUS WHEN DRIVING IN LOW LYING AREAS...AND REPORT ANY  
MINOR FLOODING TO THE NEAREST LAW ENFORCEMENT AGENCY. THEY WILL  
RELAY YOUR REPORT TO THE NATIONAL WEATHER SERVICE IN WILMINGTON.

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## 6. Flood Warning (FLW).

### 6.1 Example #1 - For Areal Flooding (Zone Code).

WGUS41 KILN 241202  
FLWILN  
OHZ081-241800-

BULLETIN - IMMEDIATE BROADCAST REQUESTED  
FLOOD WARNING  
NATIONAL WEATHER SERVICE WILMINGTON OH  
802 AM EDT THU AUG 24 2000



THE NATIONAL WEATHER SERVICE IN WILMINGTON HAS ISSUED A FLOOD WARNING FOR CREEKS AND RIVERS IN ADAMS COUNTY THROUGH THIS EVENING...

AT 800 AM EDT...WEATHER SERVICE DOPPLER RADAR INDICATED THAT OVER 3 INCHES OF RAIN HAD FALLEN OVER PARTS OF THE COUNTY. AN ADDITIONAL ONE OR TWO INCHES ARE POSSIBLE THROUGHOUT THE DAY. AS A RESULT... HIGH WATER LEVELS CAN BE EXPECTED INTO THE EVENING HOURS. SOME LOCATIONS IN THE WARNING AREA INCLUDE WEST UNION AND BLUE CREEK.

IF FLOODING IS OBSERVED...ACT QUICKLY! MOVE TO HIGHER GROUND TO ESCAPE FLOOD WATERS. DO NOT STAY IN AREAS SUBJECT TO FLOODING WHEN WATER BEGINS RISING.

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## 6.2 Example #2 - For Areal Flooding (County Code).

WGUS46 KOTX 061803  
FLWOTX  
WAC051-070000-

BULLETIN - IMMEDIATE BROADCAST REQUESTED  
FLOOD WARNING  
NATIONAL WEATHER SERVICE SPOKANE WA  
1102 AM PDT THU JUN 6 2002

THE NATIONAL WEATHER SERVICE IN SPOKANE HAS ISSUED A FLOOD WARNING FOR THE PEND OREILLE RIVER IN PEND OREILLE COUNTY IN NORTHEAST WASHINGTON...

ON THE PEND OREILLE RIVER BELOW ALBENI FALLS DAM...THE MOST RECENT READING WAS 91,800 CFS AT 10 AM THURSDAY. THE FLOOD FLOW IS 100,000 CFS. THE OUTFLOW FROM ALBENI FALLS DAM IS FORECAST TO REMAIN BETWEEN 90000 AND 95000 CFS THROUGH FRIDAY.

THOUGH THE RIVER IS CURRENTLY BELOW THE FLOOD FLOW...MINOR FLOODING IS BEING REPORTED ALONG THE RIVER DOWNSTREAM FROM NEWPORT TO THE CANADIAN BORDER. SEVERAL STRUCTURES ARE FLOODED AND SOME SAND BAGGING OPERATIONS ARE OCCURRING. ANY RAINFALL WILL ADD TO THE EXISTING HIGH FLOW.

BOATERS AND PERSONS WITH INTERESTS ALONG THE PEND OREILLE RIVER ARE URGED TO USE EXTREME CAUTION WHEN NEAR OR ON THE RIVER. STAY TUNED TO FURTHER DEVELOPMENTS BY LISTENING TO NOAA WEATHER RADIO OR YOUR LOCAL TV OR RADIO STATIONS.

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## 6.3 Example #3 - For Flooding At Forecast Points (Segmented).

WGUS46 KPQR 051759  
FLWPQR  
WAC015-ORC009-070000-

BULLETIN - IMMEDIATE BROADCAST REQUESTED  
FLOOD WARNING  
NATIONAL WEATHER SERVICE PORTLAND OR  
1000 AM PST TUE DEC 05 2000

THE NATIONAL WEATHER SERVICE IN PORTLAND HAS ISSUED A FLOOD WARNING FOR THE FOLLOWING RIVERS...

COWLITZ RIVER IN COWLITZ COUNTY  
COLUMBIA RIVER IN COWLITZ AND COLUMBIA COUNTIES

WAC015-070000-

COWLITZ RIVER AT CASTLE ROCK

MOST RECENT READING: 46.8 FT / 59000 CFS AT 8 AM MONDAY  
FLOOD STAGE ---> 48.0 FT / 65000 CFS

FORECAST / REMARKS:

THIS RIVER IS EXPECTED TO RISE THROUGH THE NIGHT...REACHING FLOOD STAGE AROUND 2 AM THURSDAY. IT WILL CONTINUE TO RISE THROUGH THE MORNING HOURS AND CREST NEAR 51.5 FT LATE MORNING THURSDAY AND REMAIN ABOVE FLOOD STAGE THROUGH THE DAY. ABOVE 51 FEET...EXPECT FLOODING OF BUILDINGS AND RESIDENTIAL AREAS WEST OF THE RIVER IN THE VICINITY OF CASTLE ROCK. ALSO...EXPECT WIDESPREAD FLOODING OF LOW LYING PASTURE AND FARMLAND.

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WAC015-070000-

COWLITZ RIVER AT KELSO

MOST RECENT READING: 20.2 FT / 90000 CFS AT 9 AM MONDAY  
FLOOD STAGE ---> 21.5 FT / 100000 CFS

FORECAST / REMARKS:

THIS RIVER IS EXPECTED TO RISE THROUGH THE NIGHT...REACHING FLOOD STAGE AROUND 6 AM THURSDAY. IT WILL CONTINUE TO RISE THROUGH THE MORNING HOURS AND CREST NEAR 25.0 FT EARLY AFTERNOON THURSDAY AND REMAIN ABOVE FLOOD STAGE THROUGH THE DAY. ABOVE 24.5 FEET...FLOODING OF A FEW RESIDENTIAL AREAS IN THE KELSO VICINITY BEGINS. ALSO...EXPECT WIDESPREAD FLOODING OF PASTURE LAND AND LOW LYING ROADS.

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ORC009-WAC015-070000-

COLUMBIA RIVER AT LONGVIEW

MOST RECENT READING: 9.8 FT AT 8 AM MONDAY  
FLOOD STAGE ---> 12.0 FT

FORECAST / REMARKS:

THIS RIVER IS EXPECTED TO CREST NEAR 12.0 FEET AROUND 7 PM THIS EVENING...AND AT 12.5 FEET AROUND 6 AM THURSDAY...CORRESPONDING WITH HIGH TIDES AT LONGVIEW. ABOVE 12 FEET...EXPECT MINOR FLOODING OF UN-LEVEED LOW LYING FARMLAND NEAR THE COLUMBIA.

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RIVER STAGE FORECASTS ARE BASED ON OBSERVED AND FORECAST RAINFALL AND TEMPERATURES. IF ACTUAL RAINFALL AND TEMPERATURES VARY FROM THE FORECAST VALUES...THE RIVER STAGE WILL VARY ACCORDINGLY. NATIONAL WEATHER SERVICE RIVER FORECASTS INCLUDE CURRENT AND PLANNED RESERVOIR RELEASES. FOR THE LATEST RIVER STAGES AND FORECASTS VISIT OUR WEB PAGE AT: [http://www.wrh.noaa.gov/portland/public\\_hydro/](http://www.wrh.noaa.gov/portland/public_hydro/)

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#### 6.4 Example #4 - For Flooding At Forecast Points (Non-Segmented).

WGUS42 KMHX 061600  
FLWMHX  
NCZ029-044-091-093-070300-

BULLETIN - IMMEDIATE BROADCAST REQUESTED  
FLOOD WARNING  
NATIONAL WEATHER SERVICE NEWPORT/MOREHEAD CITY NC  
1159 AM EDT FRI APR 06 2001

THE NATIONAL WEATHER SERVICE IN NEWPORT HAS ISSUED A FLOOD WARNING  
FOR THE NEUSE...ROANOKE AND TAR RIVERS...

FOR THE NEUSE RIVER...INCLUDING KINSTON...MINOR FLOODING IS OCCURRING  
AND IS EXPECTED TO CONTINUE. FOR THE TAR RIVER...INCLUDING  
GREENVILLE...MINOR FLOODING IS OCCURRING AND IS EXPECTED TO CONTINUE.  
FOR THE ROANOKE RIVER...INCLUDING WILLIAMSTON...MINOR FLOODING IS  
OCCURRING AND IS EXPECTED TO CONTINUE.

FOR THE NEUSE RIVER AT KINSTON...MINOR FLOODING IS OCCURRING WITH A  
STAGE OF 14.2 FEET MEASURED AT 9 AM FRIDAY. MINOR FLOODING IS  
FORECAST WITH A MAXIMUM STAGE OF 15.0 FEET AT 8 PM WEDNESDAY...  
WHICH IS 1 FOOT ABOVE FLOOD STAGE. THE RIVER EXCEEDED THE FLOOD  
STAGE OF 14 FEET AT 2 PM THURSDAY. AT 14 FEET...WATER WILL BEGIN TO  
OVERFLOW INTO LOWLANDS ADJACENT TO THE NEUSE RIVER.

FOR THE TAR RIVER AT GREENVILLE...MINOR FLOODING IS OCCURRING WITH A  
STAGE OF 14.9 FEET MEASURED AT 11 AM FRIDAY. MINOR FLOODING IS  
FORECAST WITH A MAXIMUM STAGE OF 16.0 FEET AT 8 AM SUNDAY...WHICH IS  
3 FEET ABOVE FLOOD STAGE. THE RIVER WILL FALL BELOW FLOOD STAGE AT  
6 AM TUESDAY. AT 16 FEET...WIDESPREAD LOW LAND FLOODING ADJACENT TO  
THE TAR RIVER OCCURS. FARMLAND WILL BEGIN TO FLOOD ACROSS PITT COUNTY.

FOR THE ROANOKE RIVER NEAR WILLIAMSTON...MINOR FLOODING IS OCCURRING  
WITH A STAGE OF 10.2 FEET MEASURED AT 8 AM FRIDAY. MINOR FLOODING IS  
FORECAST WITH A MAXIMUM STAGE OF 10.6 FEET AT 8 PM MONDAY...WHICH IS  
0.6 FEET ABOVE FLOOD STAGE. THE RIVER EXCEEDED THE FLOOD STAGE OF  
10 FEET AT 10 AM THURSDAY. AT 10 FEET...MINOR LOWLAND FLOODING  
ADJACENT TO THE ROANOKE RIVER WILL BEGIN.

NEVER DRIVE CARS THROUGH FLOODED AREAS. THE WATER MAY BE TOO DEEP TO  
ALLOW FOR SAFE PASSAGE.

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#### 7. Flood Statement (FLS).

##### 7.1 Example #1 - To Follow up an Areal Flood Warning.

WGUS43 KJKL 241425  
FLSJKL  
KYZ068-069-241500-

FLOOD STATEMENT  
NATIONAL WEATHER SERVICE JACKSON KY  
1024 AM EDT THU AUG 24 2000

...THE FLOOD WARNING THAT WAS IN EFFECT FOR CLAY AND JACKSON COUNTIES  
UNTIL NOON EDT HAS BEEN CANCELED...

WEATHER SERVICE RADAR INDICATES THAT THE HEAVY RAIN PRODUCING THUNDERSTORMS EARLIER THIS MORNING IN CLAY AND JACKSON COUNTIES HAVE WEAKENED AND MOVED EAST OF THE AREA. THE SHERIFFS DEPARTMENT REPORTS THAT ROADS ONCE CLOSED BY HIGH WATER NEAR SEXTONS CREEK... BURNING SPRINGS AND WILD CAT KENTUCKY ARE NOW OPEN. SCATTERED LIGHT SHOWERS ARE STILL EXPECTED TODAY...BUT AT THIS TIME THEY ARE NOT EXPECTED TO CAUSE ANY PROBLEMS.

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## 7.2 Example #2 - To Follow up a Site-specific Flood Warning.

RWUS42 KMLI 031536  
FLSMLI  
IAZ089-099-ILZ025-034-032130-

FLOOD STATEMENT  
NATIONAL WEATHER SERVICE QUAD CITIES IA IL  
1035 AM CDT FRI MAY 03 2002

...THE FLOOD WARNINGS FOR GLADSTONE AND BURLINGTON ON THE MISSISSIPPI RIVER ARE NO LONGER IN EFFECT...

MISSISSIPPI RIVER NEAR GLADSTONE  
9 AM STAGE: 9.9 FT.  
FLOOD STAGE: 10.0 FT.  
CRESTED 11.19 FT AT 5 AM APRIL 30TH.  
FELL BELOW FLOOD STAGE AT 8 AM THIS MORNING AND WILL CONTINUE TO FALL.

MISSISSIPPI RIVER AT BURLINGTON  
9 AM STAGE: 15.0 FT.  
FLOOD STAGE: 15.0 FT.  
CRESTED 16.10 FT AT 6 PM APRIL 29TH.  
IS CURRENTLY FALLING BELOW THE FLOOD STAGE AND WILL CONTINUE TO FALL.

THIS WILL BE THE LAST STATEMENT FOR THESE LOCATIONS FOR THIS EVENT.  
RIVER FORECASTS INCORPORATE ONLY OBSERVED AND FORECAST 24 HOUR  
PRECIPITATION. YOU CAN FIND ADDITIONAL INFORMATION AT OUR WEB SITE:  
[www.crh.noaa.gov/dvn/](http://www.crh.noaa.gov/dvn/)

\$\$

IN TABLE FORMAT...OBSERVATIONS AND OFFICIAL NWS FORECASTS...IN FEET.

LOCATION	OBSERVED			TIME	SAT	SUN	MON	SITE
	FS	STG	DAY		05/04 7 AM	05/05 7 AM	05/06 7 AM	
MISSISSIPPI RIVER								
GLADSTONE	10.0	9.9	FRI	9 AM	9.5	9.0	8.6	GLDI2
BURLINGTON	15.0	15.0	FRI	9 AM	14.6	14.2	13.9	BRLI4

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7.3 Example #3 - To Allow a Flood Watch to Expire.

RWUS42 KPAH 240808  
FLSPAH  
ILZ076>078-083-240900-

FLOOD STATEMENT  
NATIONAL WEATHER SERVICE PADUCAH KY  
308 AM CDT THU AUG 24 2000

...THE FLOOD WATCH FOR EDWARDS...WHITE...WABASH AND WAYNE COUNTIES  
HAS BEEN ALLOWED TO EXPIRE...

AT 3 AM CDT...WEATHER SERVICE DOPPLER RADAR SHOWED SHOWERS AND  
THUNDERSTORMS RAPIDLY DISSIPATING OVER THESE COUNTIES. RAINFALL  
RATES HAVE GENERALLY BEEN BELOW ONE INCH ACROSS SOUTHERN ILLINOIS...  
AND ONLY STANDING WATER REMAINS ON A FEW ROADWAYS.

WHILE THE THREAT OF FLOODING HAS DIMINISHED...ISOLATED AREAS COULD  
STILL EXPERIENCE EXCESS WATER THROUGH 5 AM CDT.

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7.4 Example #4 - For Urban and Small Stream Flooding.

WGUS84 KSJT 281256  
FLSSJT  
TXZ127-281500-

FLOOD STATEMENT  
NATIONAL WEATHER SERVICE SAN ANGELO TX  
755 AM CDT TUE MAY 28 2002

...THE NATIONAL WEATHER SERVICE IN SAN ANGELO HAS ISSUED AN URBAN  
AND SMALL STREAM FLOOD ADVISORY EFFECTIVE UNTIL 1000 AM CDT FOR  
TAYLOR COUNTY AND THE CITY OF ABILENE...

AT 750 AM CDT...WEATHER SERVICE DOPPLER RADAR INDICATED THUNDERSTORMS  
WITH LOCALLY HEAVY RAINFALL ACROSS CENTRAL AND NORTHERN TAYLOR COUNTY.  
RAINFALL BETWEEN 1 TO 2 INCHES HAS FALLEN IN ABILENE SINCE 7 AM  
WITH ANOTHER ONE HALF INCH POSSIBLE THROUGH MID MORNING.

LOW LYING AND POOR DRAINAGE AREAS ACROSS THE CITY OF ABILENE MAY  
BECOME FLOODED AND IMPASSABLE. MOTORISTS ACROSS ABILENE SHOULD USE  
EXTREME CAUTION WHEN TRAVELING ACROSS THE CITY. DO NOT ATTEMPT TO  
CROSS AREAS WHERE WATER OF UNKNOWN DEPTH COVERS THE ROAD.

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8. Hydrologic Statement (RVS).

8.1 Example #1 - To Update Forecast Information for a River Forecast Point.

FGUS84 KFWD 110117  
RVSFTW  
TXC119-223-120100-

HYDROLOGIC STATEMENT  
NATIONAL WEATHER SERVICE FORT WORTH TX  
817 PM CDT WED APR 10 2002

THIS STATEMENT UPDATES INFORMATION FOR THE FOLLOWING LOCATIONS ON THE  
SULPHUR RIVER...COOPER

FOR THE SOUTH SULPHUR RIVER NEAR COOPER...THE STAGE AT 715 PM  
WEDNESDAY WAS 15.7 FEET. FLOOD STAGE IS 16.0 FEET. THE RIVER IS  
FORECAST TO HOLD AROUND 15.7 FEET...JUST BELOW FLOOD STAGE FOR THE  
NEXT SEVERAL DAYS. IF THE RIVER REACHES OR EXCEEDS 16.0 FEET...MINOR  
OUT OF BANK FLOODING WILL OCCUR AND A FEW RURAL ROADS WILL BEGIN TO  
FLOOD. MINOR FLOODING WILL ALSO OCCUR TO FARM AND RANCH LAND  
ADJACENT TO THE RIVER.

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LOCATION	FLD	OBSERVED		FORECAST 7 PM		
	STG	STG	DAY	TIME	THU	FRI SAT
SULPHUR RIVER COOPER	16	15.7	WED	7 PM	15.7	15.6 15.5

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## 8.2 Example #2 - To Report River Conditions for Multiple Forecast Points.

FGUS85 KTWC 281706  
RVSTWC

HYDROLOGIC STATEMENT  
NATIONAL WEATHER SERVICE TUCSON AZ  
1003 AM MST TUE MAY 28 2002

...MORNING REPORT FOR USGS GAGES IN THE UPPER GILA BASIN...

	FLOOD	STAGE	FLOW	24 HOUR	TIME
	STAGE	/FT/	/CFS/	TREND	/MST/
GILA R. NR VIRDEN NM	11	2.1	22	0.0	06 AM TUE
SAN FRANCISCO R. AT CLIFTON	23	9.8	20	0.1	05 AM TUE
GILA R. NR SOLOMON 8NE	17	5.4	56	0.0	05 AM TUE

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## 9. Hydrologic Summary (RVA).

### 9.1 Example #1 - SHEF Encoded.

SRUS43 KLMK 171530  
RVASDF  
INZ089>090-KYZ035-040-049-180300-

HYDROLOGIC SUMMARY  
NATIONAL WEATHER SERVICE LOUISVILLE KY  
1130 AM EDT TUE APR 17 2001

.B SDF 0417 DH12/DC0104171400/HT/DRH+24/HTIFF/DRH+48/HTIFF/DRH+72/HTIFF

:	STATION	FLOOD	7AM	24-HR	7AM
:	ID NAME	STAGE	STAGE	CHANGE	FORECASTS
:					FRI SAT SUN
:	OHIO RIVER				
MKLK2	:MARKLAND LOCK	51.0:	25.4/:	-3.9:	23.7 / 25.1 / 26.0 /
.END					

.B SDF 0417 DH12/DC0104171400/HP/DRH+24/HPIFF/DRH+48/HPIFF/DRH+72/HPIFF

: STATION	FLOOD	7AM	24-HR	7AM
: ID NAME	STAGE	STAGE	CHANGE	FORECASTS
:	:	:	:	FRI SAT SUN
:OHIO RIVER				
MLUK2: MCALPINE UPPER	23.0:	12.5/:	-0.1:	12.5 / 12.5 / 12.5 /
.END				

.B SDF 0417 DH12/DC0104171400/HT/DRH+24/HTIFF/DRH+48/HTIFF/DRH+72/HTIFF

: STATION	FLOOD	7AM	24-HR	7AM
: ID NAME	STAGE	STAGE	CHANGE	FORECASTS
:	:	:	:	FRI SAT SUN
:OHIO RIVER				
MLPK2: MCALPINE LOCK	55.0:	28.4/:	-4.3:	23.0 / 24.3 / 25.0 /
CNNI3: CANNELTON LOCK	42.0:	18.0/:	0.5:	18.0 / 22.4 / 20.2 /
.END				

.B SDF 0417 DH12/DC0104170707/HP/DRH+24/HPIFF/DRH+48/HPIFF/DRH+72/HPIFF

: STATION	FLOOD	7AM	24-HR	7AM
: ID NAME	STAGE	STAGE	CHANGE	FORECASTS
:	:	:	:	FRI SAT SUN
:OHIO RIVER				
FODK2: FORDHOLE LOCK	26.0:	10.0/:	-0.1:	11.1 / 11.3 / 11.4 /
HIBK2: HIGH BRIDGE LOCK	30.0:	9.9/:	0.2:	9.2 / 9.5 / 9.9 /
FFTK2: FRANKFORT LOCK	31.0:	7.8/:	0.0:	8.0 / 8.1 / 8.2 /
.END				

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## 9.2 Example #2 - Non-SHEF Encoded.

SRUS43 KDDC 201351  
RVADDC

HYDROLOGIC SUMMARY  
NATIONAL WEATHER SERVICE DODGE CITY KS  
850 AM CDT MON MAY 20 2002

LOCATION	FS	STAGE HEIGHT	24-HR CHANGE	POOL HEIGHT	24-HR CHANGE
ARKANSAS RIVER					
COOLIDGE 1S	8	2.45	0.00		
SYRACUSE	10	3.11	0.00		
GARDEN CITY	10	5.04	0.01		
DODGE CITY	11	5.82	0.01		
KINSLEY	12	3.75	-0.02		
BIG CREEK					
ELLIS	15	9.72	M		
YOCEMENTO	23	11.63	0.00		
HAYS	21	5.13	-0.02		
BUCKNER CREEK					
BURDETT 6W	16	3.73	0.00		
CIMARRON RIVER					
ELKHART 8N	8	4.01	0.00		
FORGAN 8N	7	2.44	-0.02		

CROOKED CREEK					
ENGLEWOOD	5	1.64	M		
MEDICINE LODGE RIVER					
KIOWA 2NE	10	1.36	-0.06		
PAWNEE RIVER					
BURDETT 7WNW	23	2.53	0.00		
ROZEL 1N	31	5.86	0.00		
SALINE RIVER					
WAKEENEY 5N	13	2.07	-0.01		
S.FK NINNESCAH RIVER					
PRATT 1E	8	2.78	-0.02		
SMOKY HILL RIVER					
ARNOLD 12N	7	0.69	-0.01		
CEDAR BLUFF RSVR				2143.21	M
SCHOENCHEN 3W	11	2.55	-0.02		
SCHOENCHEN 2E	11	2.23	M		
WALNUT CREEK					
ALEXANDER 4W	25	1.74	0.01		
RUSH CENTER 7W	28	6.81	0.00		
BAZINE 5NW	--	13.38	-0.03		
NEKOMA 5SW	--	12.29	-0.04		
OTIS 2SSW	--	49.39	0.00		

END

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## 10. River and Lake Forecast Product (RVD).

### 10.1 Example #1 - For Lake Sites.

FGUS54 KLUB 081306  
 RVDLBB  
 TXC045-075-169-263-091300-

DAILY RIVER AND LAKE SUMMARY  
 NATIONAL WEATHER SERVICE LUBBOCK TX  
 805 AM CDT FRI JUN 08 2001

```
.B LUB 0608 DC0106080805 DH12/HP/
:
:RESERVOIR/LAKE SITES
:
:          7AM
:  STATION  NORMAL  POOL  24-HR:
ID  NAME    POOL    ELEV.  CHANGE
:
MKZT2 :MCKENZIE LAKE  3100:  3031.69/:  -0.03:
CWRT2 :WHITE RIVER LAKE  2370:  2354.38/:  -0.02:
LHPT2 :LAKE ALAN HENRY  2220:  2206.35/:  -0.07:
:
.END
```

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10.2 Example #2 - For River and Lake Sites.

FGUS51 KLWX 011706

RVDWBC

MDC001&gt;002-009-DCC001-021700-

DAILY RIVER AND LAKE SUMMARY

NATIONAL WEATHER SERVICE BALTIMORE - WASHINGTON

1206 PM EST THU MAR 01 2001

.B WBC 0301 DC01030112

DH12/HG/DRH+24/HGIF/DRH+48/HGIF/DRH+72/HGIF

STATION		FLOOD	7AM	24-HR	7AM FORECASTS		
ID	NAME	STAGE	STAGE	CHANGE	FRI	SAT	SUN
:POTOMAC RIVER							
HPFW2	:HARPERS FERRY	18.0	: 11.44/:	0.22:	11.40	/11.32	/9.75/
LITM2	:LITTLE FALLS	10.0	: 3.71/:	0.04:	3.70	/ 3.60	/M /

:  
:END  
:

.B WBC 0301 DH12/HP

ID	LAKE NAME	FULL	WATER	OBSERVED	24-HR
:	:	POOL	ELEV.	DAY TIME	CHANGE
KERV2	:JOHN H. KERR	320	: 295.6	: THU 7 AM	-0.2

:  
:END

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11. Hydrometeorological Data Summary (HYx).11.1 Example #1 - Daily Summary (HYD).

SXUS52 KCHS 301437

HYDCHS

GAZ087-088-099&gt;101-114&gt;119-137&gt;141-SCZ040-042&gt;045-047&gt;050-011400-

CHARLESTON AREA TEMPERATURES AND PRECIPITATION

NATIONAL WEATHER SERVICE CHARLESTON SC

1036 AM EDT TUE APR 30 2002

.B CHS 0430 E DH07/TX/TN/TA/PPP/TSIRZX/TSIRZN/TSIRZ

STATION		AIR TEMP			PCPN	SOIL TEMP		
:	:	MAX	MIN	CUR	:	MAX	MIN	CUR
:....SOUTH COASTAL....								
:CHARLESTON ARPT	:CHS	92/	56/	63/	0.01/	77/	68/	
:CHARLESTON CITY	:CHLS1	92/	64/	64/	0.03/	79/	66/	
:FORT MOULTRIE	:SULS1	93/	60/	62/	0.00/	/	/	
:EDIST BEACH PARK	:EDIS1	95/	61/	61/	0.00/	/	/	
:BEAUFORT	:BEAS1	92/	62/	62/	0.01/	80/	67/	
:SUMMERVILLE	:SMVS1	93/	52/	52/	0.00/	/	/	
:ST GEORGE	:RGLS1	91/	56/	M/	0.00/	/	/	
:WALTERBORO	:WTRS1	92/	50/	58/	0.02/	/	/	
:ALLENDALE	:ALDS1	92/	49/	49/	0.00/	83/	70/	

## NWSM 10-923 NOVEMBER 20, 2002

```
:JAMESTOWN      :JAMS1    91/   55/   57/   0.02/   /   /  
:  
:...SOUTHEAST GEORGIA...  
:SAVANNAH ARPT  :SAV      93/   56/   66/   0.00/   /   /   74  
:SPRINGFIELD    :SRFG1    93/   57/   57/   0.11/   /   /  
:CLYO           :CYOG1    88/   50/   51/   0.01/   82/  73/  
:EDEN           :EDEG1    93/   55/   66/   0.00/   /   /  
:BROOKLET       :BRKG1    92/   61/   62/   0.05/   /   /  
:ROCKY FORD     :RCFG1    91/   53/   53/    M /   /   /  
:  
.END  
  
$$
```

### 11.2 Example #2 - Monthly Summary (HYM).

CSUS56 KSFO 051725  
HYMSFO

MONTHLY PRECIPITATION FOR SF BAY AREA AND CENTRAL COAST  
0925 AM PST FRI APR 05 2002

```
.B MTR 0331 P DH24/PPM  
ANGC1  3.69   :ANGWIN PACIFIC UNION COLLEGE  
BISC1  4.62   :BIG SUR STATE PARK  
FORC1  3.32   :FORT ROSS  
HLDC1  3.46   :HEALDSBURG FIRE DEPT  
KICC1  0.58   :KING CITY  
MHMC1  3.86   :MOUNT HAMILTON  
NSHC1  2.63   :NAPA STATE HOSPITAL  
PANC1  0.90   :PANOCHE 2W  
PRSC1  0.80   :PRIEST VALLEY  
SFOC1  2.27   :SAN FRANCISCO DOWNTOWN  
SCRC1  3.52   :SANTA CRUZ  
STSC1  2.43   :SANTA ROSA  
WVIC1  1.51   :WATSONVILLE WATERWORKS  
.END  
  
$$
```